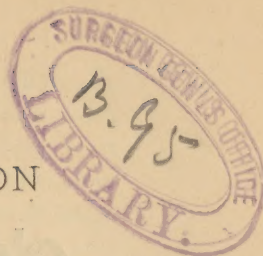


PARK (Roswell)

On a new modification
of the
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ON A NEW MODIFICATION OF THE ANTERIOR SPLINT.

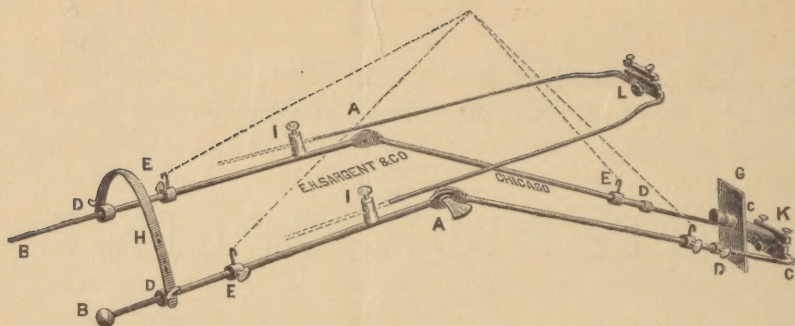
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A reprint from the Transactions of the Illinois State Medical Society for
1878.

There are a few surgeons of ability and experience who persist in being obtuse to the merits of Nathan R. Smith's "anterior splint," or its modification by Prof. Hodgen. To such the writer can hardly hope to present any acceptable form of the same. But he ventures to hope that to the balance of the profession the splint described below will commend itself. The simplicity of the Hodgen splint has always been regarded as strongly in its favor; it could be made by any smith, and was comparatively light and portable. I will not extend the limits of this paper by expatiating on its valuable points. Nevertheless, experience with it suggested a few improvements. When properly applied, the ankle could be moved pretty freely, and stiffening of the joint was thus avoided, while the patient was gratified accordingly. But not so with the knee-joint; its position was almost as unalterable as when confined in wood or plaster dressings.

To meet this and other objections I devised, and Messrs. Sargent & Co., of this city, constructed for me, the following modified form:



A D, A D, are tubes, with joints and thumb-screws at A, A. Telescoping into them are rods B D and C D, easily set at any point by thumb-screws D, D, etc. A flexible, yet sufficiently stiff band, H, separates and firmly holds the upper extremities; by using a short or long band, and adjusting the screws in the slots made for them, the distance of the rods can be varied from four to nine or more inches. The lower rods, C D, are bent at right-angle at C, and fastened together by a clamp at K, so that they can also be adjusted at any distance apart from two and a half to five inches.

By such means, every feature of the splint can be regulated to fit any size or length of limb to which such apparatus is appropriate.

For points of suspension, sliding thimbles E, E, with thumb-screws and carrying-hooks, are provided. The end of one rod at B is knobbed, to prevent the bandages slipping off in the perinæum, while it is intended the other rod shall extend up to the crest of the ilium on the outside. The rods are interchangeable. To this extent it is simply an adjustable style of the good old anterior splint.

To facilitate extension, the following method, original as far as I know in such application as this, is employed:

At G is a thin wooden block, around which the adhesive plaster strips coming down the leg are fastened as usual. To this, through a perforation and by aid of a cork stopper, or by other suitable means, a piece of rubber tubing is attached, the

other end of which passes between two bars of the clamp K, and may thus be firmly held at any desired point. Too much can hardly be said in favor of this elastic extension; it is found to overcome the tension of the muscular fibre more easily and quickly than any other method. Its general adoption, where possible, in orthopædic apparatus, is sufficient evidence of this.

But it will be at once seen that when the splint is bent at any considerable angle, there would be a tendency to curvature of the femur at the weak point, supposing the fracture to be in that bone, while the foot and leg are being thus pulled upon. To obviate this, an addition was made. At I, I are two standards, firmly fastened, through which pass rods, as seen in the engraving; these are bent and fastened by the clamp L, similar to that at K, and are capable of being adjusted to suit the position of the other parts of the splint. Their function will be comprehended at a glance. When the knee is bent at an angle of more than twenty degrees, say, it simply requires two extra pieces of adhesive plaster on the thigh, to leave the limb at the knee, and, running out, be attached as they would be at the foot to the wooden piece G while the rubber for elastic extension is transferred from the clamp K to the clamp L. In this way the position of the limb can be changed as often as comfort requires, while the site of the lesion and the adaptation of the fragments are undisturbed, and the extension is made in the direct line of the femur. Such changes, however, would hardly be justified until after the formation and strengthening of the callus—perhaps ten days.

The suspending cords run up to a knot, as seen by the dotted lines; and, finally, the proper extension is made by suspending by a single cord from the ceiling the whole in such a way as to tend to draw away the splint from the patient, while yet his limb is fastened firmly to it.

The writer, therefore, claims for his apparatus the following advantages:

1. Portability; it can be taken apart and made up in a package the size of a roll of music.

2. Adaptability; it can be fitted as described to any size of limb, or to a patient of any age above mere childhood.

3. Applicability to almost any fracture between hip and ankle, except that of patella. Thus one splint is suitable for almost any fracture of the lower extremity in almost any patient.

4. The benefit of the principle of elastic extension.

5. It allows the position of the joints and soft parts to be changed often enough to avoid stiffening.

6. For convenience in dressing compound fractures, it meets every requirement. The bandages in which the limb is swung can be changed as often as required, while the parts are exposed for the inspection of the attendant with a minimum of trouble, whenever desirable.

The writer thinks that these advantages more than offset what some might be inclined to consider the expensive or complicated character of the apparatus.



